

## TWO MOSAIC PAVEMENTS FROM BITHYNIA

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THE two mosaic pavements of the Byzantine period that form the subject of this note are in different towns in Bithynia. The first has been unearthed recently in the Hagia Sophia in Iznik (Nicaea), while the other adorns the mausoleum of Orhan Gazi in Bursa. These two works of art, which are not yet sufficiently well known, are valuable additions to our heritage of Byzantine art.

### *I. The Pavement of the Hagia Sophia in Iznik*

After the capture of Iznik by the Ottomans in 1331 the Hagia Sophia (Orhan Gazi Mosque), the largest church in the city, was converted into a mosque by Orhan Gazi (1328-1360).<sup>1</sup> It was damaged by fire in the sixteenth century and was repaired by the architect Koca Sinan in the reign of Soliman the Magnificent (1520-1566).<sup>2</sup> The pavement of the building was then raised and alterations which can still be seen were effected in its inner walls. Toward the end of the eighteenth century, at the time of the city's decline, this historical monument was abandoned and it was in ruins when Hammer saw it in 1804.<sup>3</sup> For more than a century and a half the interior of the building was covered by a thick layer of earth and dense vegetation.<sup>4</sup> Only during the last fifty years has there been any serious research on the Hagia Sophia, though the building had

previously figured in publications by Charles Texier<sup>5</sup> and Hommaire de Hell.<sup>6</sup> N. Brunoff has tried to establish the chronology of the building<sup>7</sup> which shows obvious signs of different periods of construction. However, A. M. Schneider, who in 1936 conducted researches on behalf of the German Archaeological Institute in Istanbul, reached conclusions which are at variance with N. Brunoff's conjectures about the chronology.<sup>8</sup> According to Schneider, the building was originally erected in the fifth or sixth century. A pavement of stone slabs belonging to this period was found *ca.* 3.50 m. below the modern level. The lower parts of the outer walls of the original building, which were of ashlar construction, were re-used when a basilica with piers and domed pastophories was built, on a level 1.40 m. above the original, probably some time after A.D. 1065.<sup>9</sup> It is to this period that a marble pavement with a simple ornament, found by Schneider in the area of the apse and the bema, belongs (fig. 1).<sup>10</sup> When the architect Sinan undertook

<sup>5</sup> Ch. Texier, *Description de l'Asie Mineure*, I (Paris, 1839), 37 f.; *id.*, *Asie Mineure* (Paris, 1862), 99 f.

<sup>6</sup> X. Hommaire de Hell, *Voyage en Turquie et en Perse*, IV (Paris, 1860), 383 and pl. xvii. 3 (ground plan).

<sup>7</sup> N. Brunoff, "L'église de Sainte-Sophie de Nicée," *Echos d'Orient*, 24 (1925), 471-481; cf. *Byz. Zeitschr.*, 26 (1926), 205 f.

<sup>8</sup> A. M. Schneider, *Forschungen und Fortschritte*, 11 (1935), 406; *id.*, *Die römischen und byzantinischen Denkmäler von Iznik-Nicaea* (Berlin, 1943), 10-17.

<sup>9</sup> The pastophories have frescoes dating from the fourteenth century; see M. Alpatoff, "Les fresques de Sainte-Sophie de Nicée," *Echos d'Orient*, 25 (1926), 42-45. According to Schneider the basilica with piers and the pastophories are of the same period and bear a resemblance to basilicas in Bulgaria, Macedonia, and Greece.

<sup>10</sup> A. M. Schneider, *Die römischen and byzantinischen Denkmäler von Iznik-Nicaea*, pls. 9, 10, 12.

<sup>1</sup> C. Gurlitt, "Die islamischen Bauten von Iznik," *Orient. Archiv*, 3 (1912-13), 59; A. Saim Ülgen, "Iznik'de Türk eserleri," *Vakıflar Dergisi*, 1 (1938), 55; K. Otto-Dorn, *Das islamische Iznik* (Berlin, 1941), 9-13.

<sup>2</sup> *Tazkiret'ül ebniye*, I, 55; E. Egli, *Sinan, der Baumeister osmanischer Glanzzeit* (Erlenbach-Zürich, 1954), 125.

<sup>3</sup> J. von Hammer, *Umblick auf einer Reise von Constantinopel nach Brussa* (Pest, 1818), 113 ff.

<sup>4</sup> Gurlitt, *op. cit.*, pl. 14, fig. 11; L. Schneller, *Nicaea und Byzanz* (Leipzig, 1907), 57.

repairs in the Hagia Sophia in the sixteenth century the pavement was raised once again, by 1.50 m. In 1955, while ancient monuments were being cleared and restored in Nicaea, the thick layer of earth was removed from the interior of the Hagia Sophia, and there came to light in the nave a hitherto unknown pavement which, because of its quality and design, claims a unique place among works of its kind. This we propose to describe here.

This pavement, which, if the chronology advanced by Schneider is correct, should be part of the basilica constructed in the eleventh century, was discovered in the part of the nave nearest the narthex, almost in front of the center door (text fig. I). Executed in the technique known as *opus sectile*,<sup>10a</sup> its large and beautiful composition, measuring 3.60 × 3.60 m., can still be appreciated in its entirety, though some parts of it are missing (fig. 2). The pavement provides a new example of the forms of decoration characteristic of the floor mosaics of the middle Byzantine period (ninth to thirteenth centuries). A wide border of squares and rectangles of carefully balanced design and proportions frames a square area (fig. 3). This large square is divided into two concentric circles formed by interlaced ribbons of white marble. The innermost circle frames a circular plaque of *verde antico*, 0.55 m. in diameter, edged with small polychrome mosaics. Between the two circles appear eight smaller circles joined to these and to each other by interlaced ribbons of white marble. Each of these small circles is made up of a plaque 0.25 m. in diameter and a frame of small stones. It is interesting to note that the pattern of this frame varies in each instance. The center of each knot formed by the interlaced ribbons is also occupied by a dark plaque. The four spandrels between the square frame and the large interlaced circle are decorated with a design showing a thorough and intricate knowledge of geometry—a large circle framed with interlaced ribbons which form four knots (figs. 3, 4, 5). A feature which renders this magnificent pavement even more remarkable

is the ornamentation in mosaic of the vari-form spaces between the interlacing which itself produces a very harmonious effect. Nearly every one of these spaces has a different design (figs. 6, 7). The eight small mosaic areas nearest the center, all of which are well preserved, are decorated with fleur-de-lis motifs carved in stone (fig. 10). Of the eight larger areas within the outer circle, some are wholly, others partially, obliterated. Three are nearly intact (figs. 8, 9), and in the center of two of these there are large circular designs of small mosaic (figs. 2, 3, 8).

This beautiful and imposing pavement is far superior to the commonplace floor decoration previously uncovered in the bema and apse of the same building. Though it is difficult to reach a definite conclusion as to whether the pavement in the western part of the nave was elaborated in order to give particular importance to this part of the church (i.e. to form an *omphalion*), I do not think this very probable. Elaborate ornamentation was not confined to this part of the floor; in the right aisle there also was a mosaic pavement in the same style. Unfortunately, of this latter pavement no more than the layer of mortar bearing the outlines of the interlacing remains, and this in only a very small area. Nevertheless, the evidence is valuable because it serves to show that the nave and both aisles belonging to the second period of construction of the Hagia Sophia were richly ornamented in the same technique.

## II. The Pavement of the Mausoleum of Orhan Gazi in Bursa

Bursa (*Prusias*) flourished as the capital of the Ottoman Turks during the early years of the Ottoman Empire and its monuments have been studied and accepted as those of a Turkish city. However, practically nothing is known of the buildings of Byzantine Bursa which lies enclosed within the fortress. Orhan Gazi captured Bursa after a long siege, and in accordance with the dying injunction of his father Osman Gazi, founder of the Ottoman Empire, he had the latter's remains brought to Bursa and buried in the *Gümüşlü Kubbe* (Silvered Dome), a Byzantine church. This building, thus known because the lead

<sup>10a</sup> The terms *opus sectile* and *opus alexandrinum* often cause confusion among specialists. In the present article the term *opus sectile* is preferred.

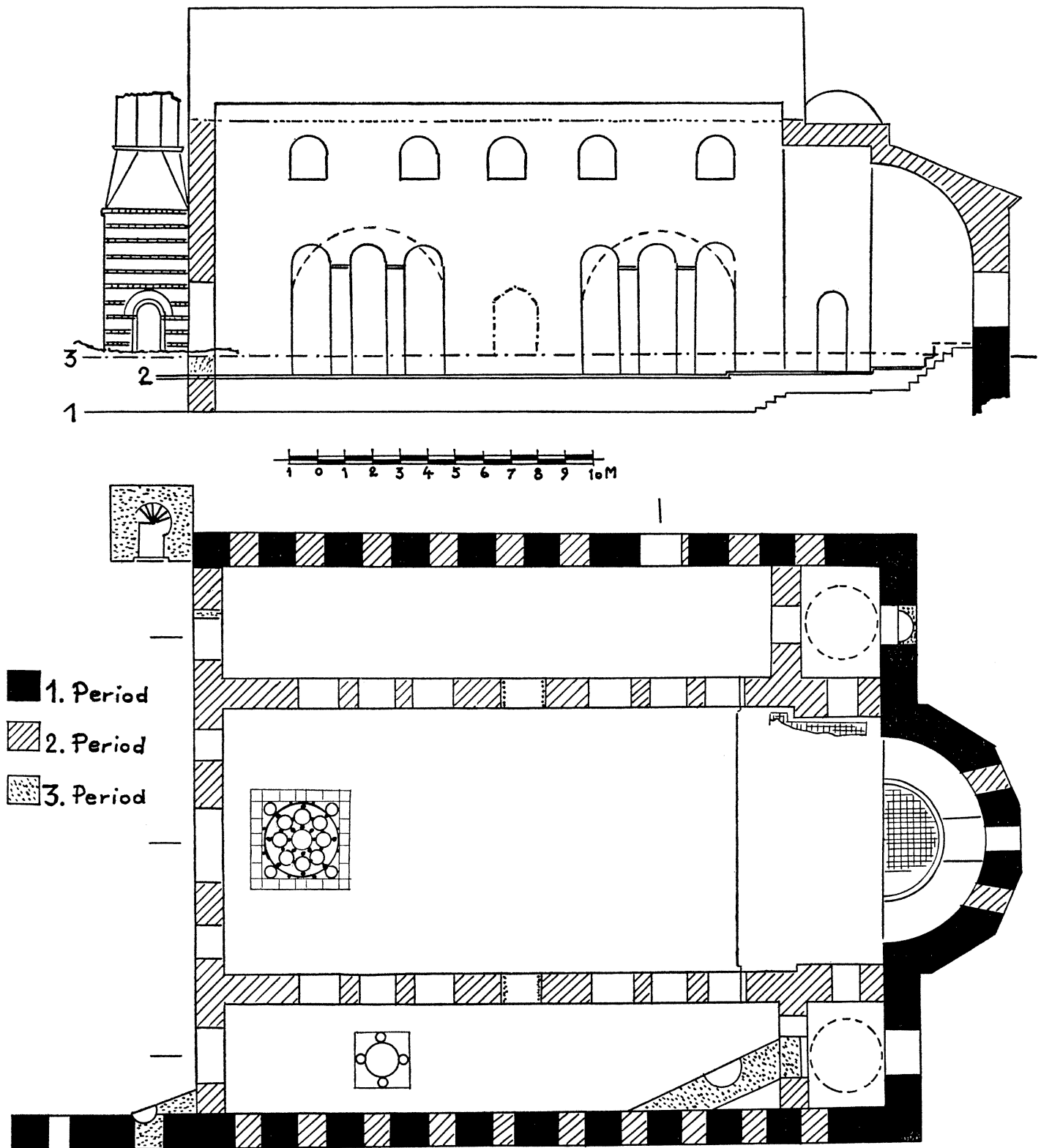


Fig. I. Iznik (Nicaea), Hagia Sophia. Ground Plan and Longitudinal Section, showing Periods of Construction

plaques covering its dome shone like silver when viewed from afar, was circular in shape. It was ruined in the terrible earthquake which destroyed Bursa in 1855, and the present octagonal mausoleum was constructed in its place and on its foundations. We learn from early Ottoman annals that, in keeping with a practice followed in all captured cities, a church near Osman Gazi's mausoleum was converted into a mosque. When Orhan Gazi died ca. 1360, he was buried in a building *adjoining* this church; so once again a former Byzantine church, or, rather, some part or annex of one, was converted into an Islamic mausoleum.<sup>11</sup> All the early sources and travellers<sup>12</sup> assert that the mosque and mausoleum of Orhan Gazi were an old church and were joined together. Today there exists only a modern mausoleum, renovated after the earthquake of 1855, with a square ground plan and a dome supported by four pillars. Three alternative conjectures can be advanced about the Byzantine church:

1. The church may have been in the form of a basilica, and may have been divided lengthwise by a wall; thus half may have become a mosque while the other half formed the mausoleum.

2. Adjoining the church there may have been a *parekklesion* which also had the form of a church. One of the two buildings may have become a mosque and the other the mausoleum.

3. The church may have had a deep *narthex*, i.e. a *liti*, as seen in Greece and on Mount Athos in the late Byzantine period. The doorway which connected the two parts of the building may have been closed up and thus the two parts may have been separated from each other, one becoming the mausoleum and the other the mosque.

It is impossible to solve this problem without a certain amount of probing or excavation, for the part which was the mosque was demolished in 1855. As for the mausoleum, it was built on old foundations, and in its present form is not very interesting. Its most important feature, which goes to

prove that it was built on the remains of a Byzantine church, is the mosaic ornamentation of its pavement. This pavement, hitherto neglected by those who have studied the ancient monuments of Bursa, bears a resemblance to the one found in Nicaea. However, as the building in question has undergone extensive changes and as the catafalque of Orhan Gazi occupies the center, it is impossible to discover the exact layout of the pavement's composition. It must also be noted that the designs are in very bad condition. The four major fragments which have survived (text fig. II) can be described as follows:

A. A fragment of pavement is seen upon entering, at the foot of the first left-hand pillar. Beside a square panel (1.20 × 1.20 m.; text fig. III) there remains a section of a wide border with part of an interlaced knot. Also adjoining the panel was a plain, oblong plaque. This shows that the original pavement was not uniformly decorated but included parts that were plain and unadorned. The oblong plaque is framed with a border of dark and white stones with crosses made of dark stone. The square panel, which is in fairly bad condition, is adorned with a pattern of nine interlacing circles, each of which contains a round plaque. Colored borders separate the interlaced frames from the central plaques most of which are obliterated.

B. It is probable that the part which is at the foot of the catafalque and between the two left-hand pillars originally formed a square (4.80 × 4.80 m.; text fig. IV and fig. 11). The base of the catafalque was placed on part of this square and almost a third of it was effaced and repaired in haphazard fashion with marble and stone rubble. The square was enclosed in a stone border, the remains of which are seen on either side. The composition within the square consists of an interlace pattern forming four large circles, as well as eight small knots and four spherical triangles, one in the middle of each side. Each of the four circles contains a disc. Only one of the triangles is intact (fig. 12). It has a design of dark and white stones arranged like rays around a dark disc. In this composition the interlacing is made up of three ribbons, the two outer ones

<sup>11</sup> S. Eyice, "Bursa'da Osman Gazi ve Orhan Gazi türbeleri," *Vakıflar Dergisi*, 5 (1963), 131-147.

<sup>12</sup> For the books of travel that mention this site, see the article quoted in note 11.



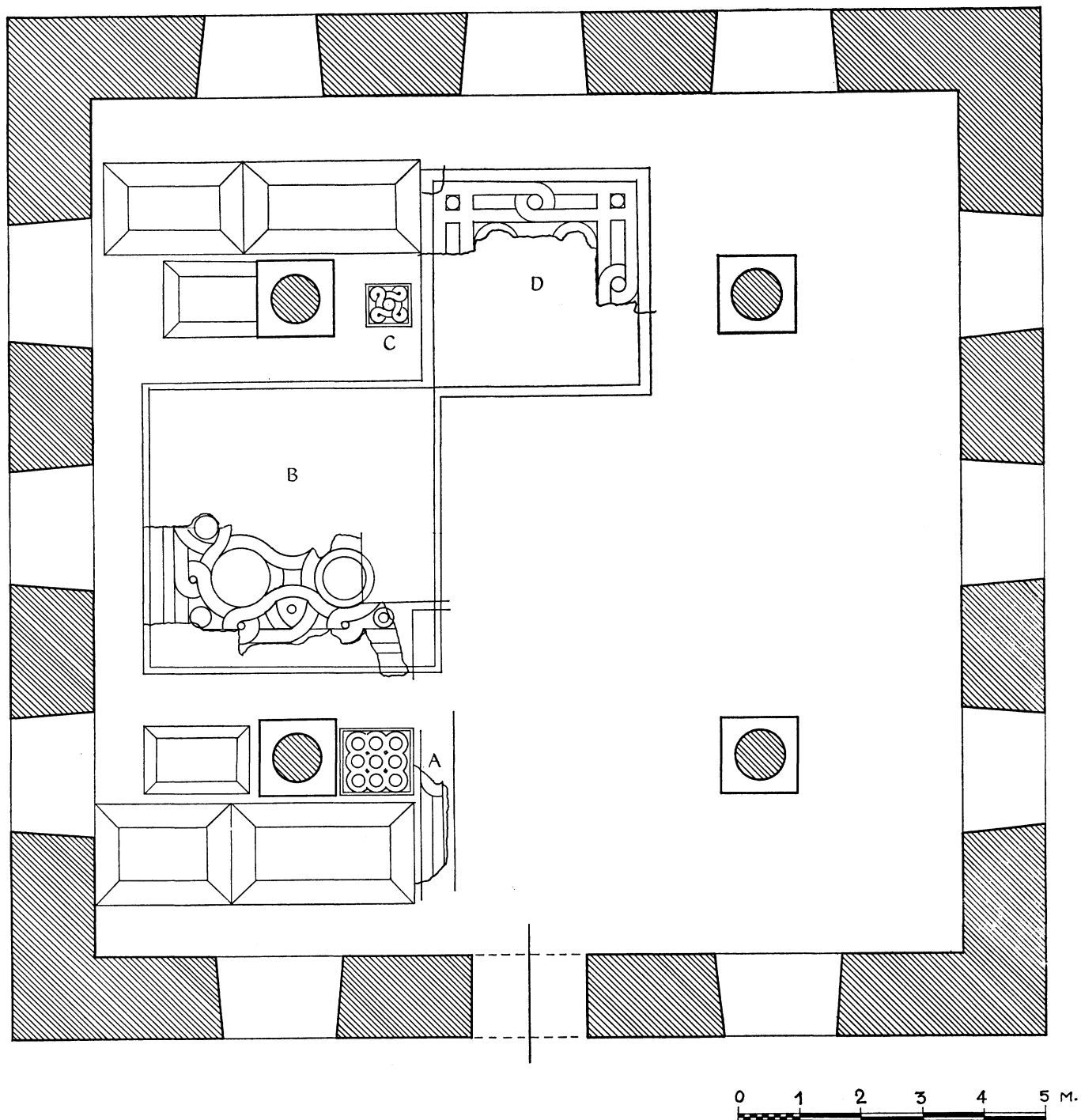


Fig. II. Bursa, Mausoleum of Orhan Gazi. Ground Plan, showing Remains of Byzantine Pavement

being white while the one in the center is chequered.

C. At the base of the pillar on the far side of the catafalque there is a small panel measuring 0.60 × 0.75 m. Its decoration, which shows four interlacing circles around a large central disc, features the same elements as the panels previously described but differs in technique, the entire pattern being carved out of a single slab of stone (fig. 13).

D. Another large square panel (3.30 × 3.30 m.) was situated near the catafalque. Parts of its outer border remain (text fig. V and figs. 14, 15). Enough of the interlacing is preserved to warrant the assumption that the design in the center resembled the one described under "C."

### III. Pavement Mosaics in Byzantine Art

There is little doubt that pavement mosaics resembling the two here described were more common than has hitherto been imagined. While this note was being written, a daily paper published in Istanbul reported the discovery of yet another floor of the same kind. This pavement (fig. 16), which belonged to a Byzantine church, was unearthed by would-be treasure hunters at a point where the Istanbul-Ankara road crosses the Kartal-Yakacik road.<sup>13</sup>

Interlace patterns with curved pieces of marble framing polychrome motifs or round plaques were, in fact, a popular form of interior decoration of churches, particularly during the middle Byzantine period.<sup>14</sup> We find some very simple examples of this type of decoration, alongside others which call for a thorough knowledge of geometry. The pavement of the Hagia Sophia of Iznik, due

to its rich and skillfull design, occupies a prominent place among works of its kind. Until the year 1922 a pavement executed in the same technique was preserved in the Koimesis Church, also in Iznik.<sup>15</sup> Since the debris of this church was cleared away in recent years, the remaining parts of its pavement can once more be seen (figs. 17, 18). Here, interlacing adorns only the borders. No attempt has been made to create a large and intricate composition. Again in Iznik, in the ruins of a church believed to be that of Hagios Tryphon built by Theodoros II Laskaris (1254-1258), fragments have been found which indicate that a pavement of the same type existed there also, though no clue remains as to its design.<sup>16</sup>

In Istanbul we find the same kind of decoration in the church of the Monastery of Studion (Imrahor Mosque) which was extensively repaired after the Latin invasion. But here the design of the pavement is comparatively simple, the space being divided into rectangles.<sup>17</sup> On the other hand, what is perhaps the most magnificent example of this kind of pavement decoration has been rediscovered recently in Istanbul in the church of the Pantokrator Monastery (Zeyrek Mosque) which was built in the twelfth century.<sup>18</sup> Here the interlacing is not very

<sup>15</sup> O Wulff, *Die Koimesiskirche in Nicaea und ihre Mosaiken* (Strasbourg, 1903), 157; Th. Schmit, *Die Koimesis-Kirche von Nikaia* (Berlin-Leipzig, 1927), 14, pls. IV, X, XI.

<sup>16</sup> S. Eyice, "Iznik'de bir Bizans kilisesi," *Belleten*, 13 (1949), 37-51, pl. XIX; for the identification of the church, see I. Papadopoulos, "Ο ἐν Νικαίᾳ τῆς Βυθινίας ναὸς τοῦ ἁγίου Τρύφωνος," *Epeteris Hetaireias Byzantinon Spoudon* (1952), 110-113.

<sup>17</sup> J. Ebersolt and A. Thiers, *Les églises de Constantinople* (Paris, 1913), 11, fig. 2; S. Eyice, *Istanbul, Petit guide à travers les monuments byzantins et turcs* (Istanbul, 1955), pl. VIII, 13. Twenty years ago, when the pavement was in better condition, it was recorded in drawings which, however, have not been published; cf. "Jahresbericht des Arch. Inst. d. Deutschen Reiches für das Haushaltsjahr 1942-43," *Arch. Anzeiger* (1942), VIII f.

<sup>18</sup> W. Salzenberg, *Altchristliche Baudenkmale von Constantinopel*, (Berlin, 1854), pl. 4; A. van Millingen, *Byzantine Churches* (London, 1912), 234, fig. 76; for the first notices of the rediscovery of the pavement, see Ph. Schweinfurth, "Ein Mosaik aus der Komnenenzeit in Istanbul," *Belleten*, 17 (1953), 489-500; *id.*, "Der Mosaik-

<sup>13</sup> "Istanbul'da Bizans hazinesi araniyor," *Yenisabah* (Jan. 3, 1963).

<sup>14</sup> Byzantine texts show that the polychrome pavements in churches were likened to flowery meadows; cf. A. Frolov, "Deux églises byzantines," *Études byzantines*, 3 (1945), 46, 53, 55 ff. This imitation of nature in pavement decorations calls to mind the Persian carpets which depict a garden with a pond; cf. W. Bode and E. Kühnel, *Vorderasiatische Knüpfteppiche* (Leipzig, 1929), fig. 59; K. Erdmann, *Der orientalische Knüpfteppich* (Tübingen, 1955), fig. 123; *Türk ve İslâm eserleri Müzesi rehberi* (Istanbul, 1939), no. 17.

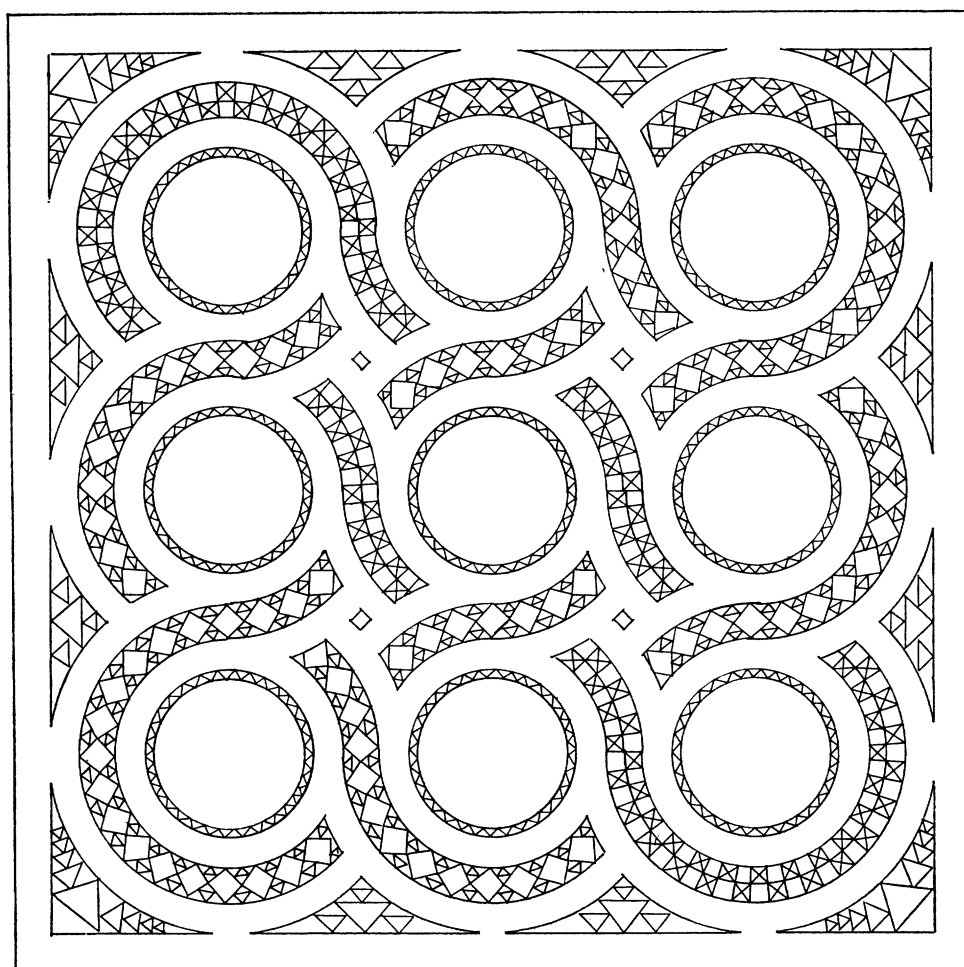
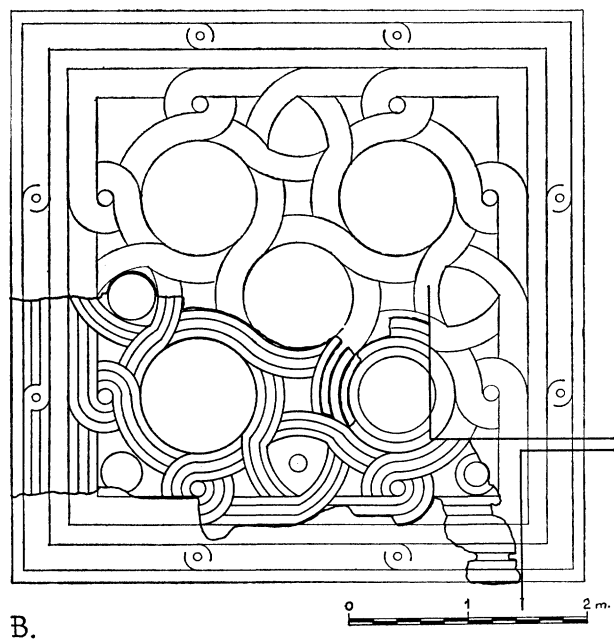
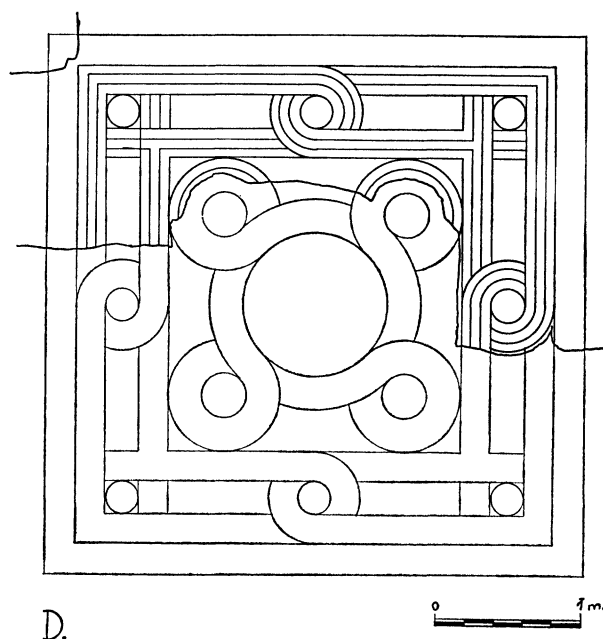


Fig. III. Bursa, Mausoleum of Orhan Gazi. Byzantine Pavement, Fragment A



B.

Fig. IV. Bursa, Mausoleum of Orhan Gazi.  
Byzantine Pavement, Fragment B



D.

Fig. V. Bursa, Mausoleum of Orhan Gazi.  
Byzantine Pavement, Fragment D

intricate because the plaques are large and widely spaced, but in between there are some remarkable figures and compositions inlaid in *opus sectile*. Again, in the south church of the Monastery of Lips (Fenârî Isa Mosque), which was built in the thirteenth century, two very small fragments of a similar mosaic pavement were discovered.<sup>19</sup> In the side chapel of the Church of Pammakaristos (Fethiye Mosque), which was built in the early fourteenth century, there is also a fragment of the same kind of pavement. The pavement of the Hagia Sophia in Istanbul includes a comparatively poor rendering of the design we found in the church of the same name in Iznik.<sup>20</sup> This *omphalion*, in which some try to discover a symbolic meaning,<sup>21</sup> and which perhaps marks the spot where the emperors were crowned in the thirteenth century,<sup>22</sup> displays defects in both design and composition which are not present in the Iznik mosaic. From this it can be inferred that the pavement of the Hagia Sophia in Istanbul was extensively repaired and relaid after the earthquake in the middle of the fourteenth century. Similarly, in Istanbul, in a small chapel next to the Martyrion of Hagia Euphemia, on the site now occupied by the Palace of Justice, remains of an elaborate mosaic pavement which was probably in secondary use were

discovered, and some parts of it are now in the Archaeological Museums of Istanbul.<sup>23</sup> At Yedikule, in one of the towers constructed by Mehmed the Conqueror, on the side facing the courtyard, there appears a slab hollowed out to form a setting for this kind of decoration (fig. 19). The nearest parallel to the Iznik mosaic appears in the Hagia Sophia at Trabzon (Trebizond). This thirteenth-century church, which is part of a monastery, has a pavement which is, in fact, a replica of the one in Iznik, with some minor differences.<sup>24</sup> At Akçaabad (Platana, Pulathane), near Trabzon, we find another remarkable example with a rare color scheme, its interlacing being executed in red.<sup>25</sup> In Konya a pavement was found in the cellar of a house in the quarter called Muhacir Pazarı and some parts of it were removed to the local museum.<sup>26</sup> Though the published photographs are, unfortunately, quite inadequate, it is evident that this floor belonged to one of the churches in Konya and that it was at least as elaborate as its counterparts in Iznik and Bursa.<sup>26a</sup>

fussboden der Komnenischen Pantokratorkirche in Istanbul," *Arch. Anzeiger* (1954), 253–260; P. Underwood, "Notes on the Work of the Byzantine Institute in Istanbul, 1954," *Dumbarton Oaks Papers*, 9–10 (1955–1956), 299–300, figs. 114–116. Cf. p. 335 ff. of the present volume for a full account of this pavement by A. H. S. Megaw.

<sup>19</sup> For a very brief note, see *Arch. Anzeiger* (1929), col. 346 (by Macridy and Schede). This has not yet been published.

<sup>20</sup> W. Salzenberg, *op. cit.*, pl. 22, figs. 9–15; M. Antoniadès, "Εκφράσις τῆς Ἀγίας Σοφίας" (Athens, 1907–1909), II, 38; (A. M. Schneider), *Resimli Ayasofya kılavuzu* (Istanbul, 1935), fig. 10; N. Can Gülekli, *Hagia Sophia* (Ankara, n.d.), with a good photo.

<sup>21</sup> E. Unger, "Das Weltbild-Mosaik der Sophienkirche in Konstantinopel," *Forschungen und Fortschritte*, 11 (1935), 445–447; cf. A. M. Schneider, *Byzanz* (Berlin, 1935), 34–37.

<sup>22</sup> The Russian pilgrim Antony, who visited Istanbul about the year 1200, speaks of a red marble pavement on which the emperors were crowned; Mme. de Khitrow, *Itinéraires russes en Orient* (Geneva, 1889), 95.

<sup>23</sup> R. Duyuran, "First Report on Excavations on the Site of the New Palace of Justice at Istanbul," *Arch. Museums of Istanbul—Fifth Report* (1952), 23–28, figs. 4, 5.

<sup>24</sup> Ch. Texier and R. Popplewell Pullan, *Byzantine Architecture* (London, 1867), pl. 17; Ch. Texier, *Asie Mineure* (Paris, 1862), 597; Selina Ballance, "The Byzantine Churches of Trebizond," *Anatolian Studies*, 10 (1960), 161 ff. A complete publication of this beautiful pavement is being prepared.

<sup>25</sup> S. Ballance, *op. cit.*, 165.

<sup>26</sup> M. Mesut Koman, "Konya'da son Roma devrine ait bir saray bakiyesi," *Konya*, no. 7 (1937), 439–441, 2 pls.; cf. M. Koman, *Türkiye Turing ve Ot. Kurumu Belleteni*, no. 224 (Sept. 1960), 12, note 1; M. Önder, "Konya'da Selçuklulardan önceki devirlere ait eserler üzerinde kısa notlar," *Anıt* (Konya, 1962), no. 30, 25, fig. p. 26.

<sup>26a</sup> Three other more or less similar pavements should also be mentioned: *a.* In a small church on the island of Kalolimni (now Imralı adası). Cf. F. W. Hasluck, "Bithynica," *Annual of the British School at Athens*, 13 (1906–1907), 301–304. *b.* In the ruins of what is presumed to be the Church of St. John the Baptist at Hebdomon (now Bakırköy) in the vicinity of Istanbul. Cf. R. Demangel, *Contributions à la topographie de l'Hebdomon* (Paris, 1945), 21, figs. 8, 9, pls. v–vi. *c.* In the bema of the Church of St. John in Ephesus. Cf. *Forschungen in Ephesos*, IV, 3 (Vienna, 1951), pl. LXXIV. In

In Greece, too, we meet this type of floor in Byzantine buildings. Besides the rather elaborate floor mosaics of the church of the monastery of Sagmata,<sup>27</sup> other examples are to be found at Hosios Lukas,<sup>28</sup> built about A.D. 1000, in the eleventh-century church of the Nea Moni on the island of Chios,<sup>29</sup> and in other buildings.<sup>30</sup> The pavement of the church of the monastery of Iviron on Mount Athos is of special interest in our context, as it is very similar to those in Iznik and Bursa.<sup>31</sup>

Mosaic pavements of this kind were used also in various regions outside Byzantium. We know that Abbot Desiderius commissioned Byzantine artisans to lay the floor of the church at Monte Cassino (1066–1071). Of this floor only a good early eighteenth-century drawing survives.<sup>32</sup> But a similar pavement is still preserved in the Church of St. Mennas in S. Agata dei Goti, between Benevento and Capua, which was dedicated in 1110.<sup>33</sup> Similar pavement decorations appear in many buildings in Sicily, which was greatly influenced by Byzantium. We find examples

at Palermo in the Cappella Palatina,<sup>34</sup> which was founded in 1132; in the church of La Martorana (S. Maria dell'Ammiraglio), constructed ca. 1143; and finally in the church of S. Cataldo, which was begun in 1161.<sup>35</sup> This type of ornamentation was very much in vogue in Italy from the eleventh to the thirteenth century. It was used not only for pavements, but also in the decoration of church furniture.<sup>36</sup> We find examples in the pulpits of the Cathedrals of Salerno<sup>37</sup> and Ravello<sup>38</sup> built in 1175 and 1272 respectively. In Rome we see the same form of decoration in the pavement, dating from the thirteenth century, of the church of S. Lorenzo fuori le mura<sup>39</sup> and also in that of San Clemente<sup>40</sup> and probably a little earlier in that of Sta Maria Maggiore.<sup>40a</sup> In Venice, which was more under the influence of Byzantine art, the pavement of San Marco is embellished with interlaced motifs. Another example, at San Donato in Murano, has an inscription of A.D. 1140.<sup>41</sup> In Italy the construction of mosaic pavements with interlacing became a local industry. During the twelfth and thirteenth centuries a group of artisans known as Cosmati specialized in this type of ornamentation which was inspired by Byzantine models.<sup>42</sup>

Turning to other areas outside Byzantium, we find in the Church of St. Sophia in Kiev a very simple and unpretentious example of

addition there is a fragment of a Byzantine interlaced pavement mosaic re-used on the façade of an old Turkish mausoleum, called Revak Sultan türbesi in Manisa.

<sup>27</sup> A. Orlandos, "Ἡ ἐν Βοιωτίᾳ μονὴ τοῦ Σαγματᾶ," *Archeion ton Byzantinon Mnemeion tes Hellados*, 7 (1951), figs. 23–32.

<sup>28</sup> Ch. Diehl, *L'église et les mosaïques du couvent de Saint-Luc en Phocide* (Paris, 1889), 59–60; R. W. Schultz-S. H. Barnsley, *The Monastery of Saint Luke of Stiris in Phocis* (London, 1901), pls. 30–33.

<sup>29</sup> A. Orlandos, *Monuments byzantins de Chios*, II (Athens, 1930), pl. 21; H. Bloch, "Monte Cassino, Byzantium, and the West in the Earlier Middle Ages," *Dumbarton Oaks Papers*, 3 (1946), fig. 223.

<sup>30</sup> A. Orlandos, *Archeion*, I (1935), 95–97, figs. 5, 8; 167, figs. 8, 9; 2 (1936), 28–30, figs. 23, 24, 25; 5 (1939–1940), 67 ff., figs. 19, 20.

<sup>31</sup> G. Schlumberger, *Épopée byzantine* (Paris, 1896), I, 435, fig. on p. 453; H. Brockhaus, *Die Kunst in den Athos-Klöstern* (Leipzig, 1924<sup>2</sup>), 26, 39, attributes this pavement to the period between the late tenth and the end of the twelfth century.

<sup>32</sup> G. Vitzthum and W. F. Volbach, *Die Malerei und Plastik des Mittelalters in Italien* (Wildpark-Potsdam, 1924), 52; H. Bloch, *op. cit.*, 196 and fig. 222.

<sup>33</sup> *Ibid.*, 197 and fig. 224.

<sup>34</sup> M. Zimmermann, *Sizilien*, II, *Palermo* (Leipzig, 1905), 63, figs. 36, 38.

<sup>35</sup> Zimmermann, *op. cit.*, 5, 9, figs. 32, 33; 55, figs. 29, 31.

<sup>36</sup> E. Hutton, *The Cosmati* (London, 1950), fig. 28a: a *thronos* decorated with this type of mosaic (thirteenth century).

<sup>37</sup> H. Glück, *Die christliche Kunst des Ostens* (Berlin, 1923), pl. 96; Vitzthum-Volbach, *op. cit.*, fig. 69.

<sup>38</sup> *Ibid.*, pl. v.

<sup>39</sup> A. Muñoz, *La Basilica di San Lorenzo fuori le mura* (Rome, 1944), 32 ff., 49 and pls. 4, 37, 45, and plate facing p. 52.

<sup>40</sup> J. Neuwirth, *Frühchristliche und mittelalterliche Kunst* (Springer, *Kunstgeschichte*, II) (Leipzig, 1924), 53, fig. 40; E. Hutton, *op. cit.*, pls. 11, 55.

<sup>40a</sup> F. W. Deichmann, *Frühchristliche Kirchen in Rom* (Basel, 1947), pl. xxxvii.

<sup>41</sup> H. Rahtgens, *San Donato zu Murano und ähnliche venezianische Bauten* (Berlin, 1903), 77, fig. 81.

<sup>42</sup> Thieme-Becker, *Künstler-Lexikon*, VII, 504–506, s.v. *Cosmas* and *Cosmaten* (Swarzenski); Hutton, *op. cit.*, 7.

this kind of decoration.<sup>43</sup> Interlacing as a form of ornamentation was altogether widespread in this period; we find it in use also in Dalmatia,<sup>44</sup> and on Islamic pavements<sup>45</sup> and walls.<sup>46</sup> In nearly all the buildings of the Mameluke period more or less elaborate examples of this type of work are seen. Indeed, the tradition survived to the very end of that period in the sixteenth century. The Governor Çoban Mustafa Paşa, who was the representative of the Ottoman Empire in Egypt (1522-1523), had appropriate materials transported from Egypt to decorate the walls of the mosque he had constructed at Gebze, in the vicinity of Istanbul.<sup>47</sup>

It is obvious that this type of mosaic ornamentation became very popular about the year 1000 and thereafter flourished increasingly in different regions, primarily in Byzantium. Interlacing, which forms the basic element of the designs, has its origin in the distant past.<sup>48</sup> We find this motif in works of art executed in a great variety of materials and techniques, including stone sculpture and the rare class of Byzantine decorative wall tiles. It is difficult to say at this stage whether it carried a symbolic meaning. Unger, as has been mentioned, asserted that the *omphalion* in Hagia Sophia symbolized the solar system and the zodiac.<sup>49</sup> This view was opposed by Schneider, but the fact that on an Islamic mirror from Halep (approx. 1320), in the treasury of the Topkapı Palace, interlacing occurs in con-

junction with figures symbolizing the signs of the zodiac seems to prove that Unger was right.<sup>50</sup> For the present, however, it is difficult to solve this problem definitively.<sup>51</sup>

The origin of the motif is another problem still waiting to be solved. Interlace patterns appear on various Islamic works, for instance, on a pottery bowl from Nishapur dating from the ninth century,<sup>52</sup> on metalwork,<sup>53</sup> including bronzes from Mosul and gold inlay, and especially on textiles and book decoration.<sup>54</sup> Textiles, embroidery, and metalwork, which since very early ages have been among the principal commercial goods passing from region to region, must have played a part in the dissemination of the motif. Interlaced motifs which appear in Sassanian textiles, are also to be found on objects in the Nagy Szent Miklos Treasure, in the textiles of Bamberg (mantles of Kunegunde and Henry II, mitre of Saint Otto),<sup>55</sup> and in Late Byzantine embroidery, for instance in the Tismana *epitrichilion* dated 1380.<sup>56</sup> Other pertinent classes are wood carvings and silk stuffs.<sup>57</sup>

<sup>50</sup> M. Aga-Oglu, "Ein Prachtspiegel im Topkapu Sarayi Museum," *Pantheon*, 6 (1930), 454 ff.; H. Edhem and G. Migeon, "Les collections du Vieux Sérail à Stamboul," *Syria*, 11 (1930), 96 ff., pl. 19.

<sup>51</sup> From the seventeenth-century description by N. Bergier of the pavement decorations of Saint Rémi we learn that the signs of the zodiac were depicted on the pavement; see E. Gerspach, *La mosaïque* (Paris, 1881), 97 f.

<sup>52</sup> K. Jacobsen, *Islamische Keramik* (Museum für Kunst und Gewerbe, Heft I) (Hamburg, 1959), fig. 2; cf. M. Önder, *Konya müzesi çini eserler koleksiyonu rehberi* (Istanbul, 1961), 13, fig. 7; A. Lane, *Early Islamic Pottery* (New York, 1948), pl. 84 b (dated A.D. 1214).

<sup>53</sup> L. A. Mayer, "A propos du blason sous les Mamluks Circassiens," *Syria* (1937), 389, pl. 44 (fifteenth cent.); E. Kühnel, *Islamische Schriftkunst* (Leipzig-Berlin, 1942), 37, fig. 36 (Louvre, fourteenth cent.); 81, fig. 86 (ca. 1300); D. Barrett, *Islamic Metalwork in the British Museum* (London, 1949), pl. 25 (beginning of fourteenth cent.).

<sup>54</sup> I. Hakki (Uzunçarsili), *Kitabeler II* (Istanbul, 1929), pls. 7, 8.

<sup>55</sup> *Sakrale Gewänder des Mittelalters* (Exhibition Catalogue, Munich, 1955), figs. 19, 20, 21, 25, 58.

<sup>56</sup> G. Millet and Hélène de Ylouses, *Broderies religieuses de style byzantin* (Paris, 1947), pl. 1.

<sup>57</sup> A good example to illustrate the fact that textiles worked with these motifs served as

<sup>43</sup> B. Grekov, *La culture de la Russie de Kiev* (Moscow, 1947), pls. 14, 15.

<sup>44</sup> L. Karaman, "Notes sur l'art byzantin et les slaves catholiques de Dalmatie," *L'art byzantin chez les Slaves*, II, 2 (Paris, 1932), 332, especially 338: Le décor à entrelacs de l'art dalmate du haut Moyen-âge est-il byzantin?

<sup>45</sup> L. Hautecoeur and G. Wiet, *Les mosquées du Caire* (Paris, 1932), pls. 197, 200, 205, 210.

<sup>46</sup> *Ibid.*, pls. 114, 171, 172; E. Diez, *Die Kunst der islamischen Völker* (Berlin-Neubabelsberg, 1917), 143, fig. 188.

<sup>47</sup> H. Ethem, *Mısır'ın son Memlûk sultanı Melik Tumanbay adına Çorlu'da bulunan bir kitabe* (Istanbul, 1935), 58; K. Erdmann, "Beobachtungen auf einer Reise in Zentralanatolien," *Arch. Anzeiger* (1954), 205, fig. 30.

<sup>48</sup> For a brief discussion of this problem, see Agnes Schulz, *Das Riemenornament* (Mitteilungen des Forschungsinstituts für Kulturmorphologie, Heft III) (1928).

<sup>49</sup> Cf. *supra*, note 21.

The two Bithynian pavements, which form the subject of this Note, are outstanding in their beauty as well as in their importance. While the Bursa mosaics are only partially extant, the pavement in Iznik, which is practically intact, is one of the most magnificent specimens of its kind. In the study of these two floors we are faced with two problems which concern the history of art. In Byzantine pavements of the middle period interlace in *opus sectile* replaces the *opus tessellatum* which had been fashionable in earlier centuries. The evidence we have cited serves to show that *opus sectile* interlace began to be employed in the tenth century

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models for wall paintings can be seen in the Gregory Church of Ani, dating from the year 1215; see J. Strzygowski, *Altai-Iran und Völkerwanderung* (Leipzig, 1917), 135, fig. 128.

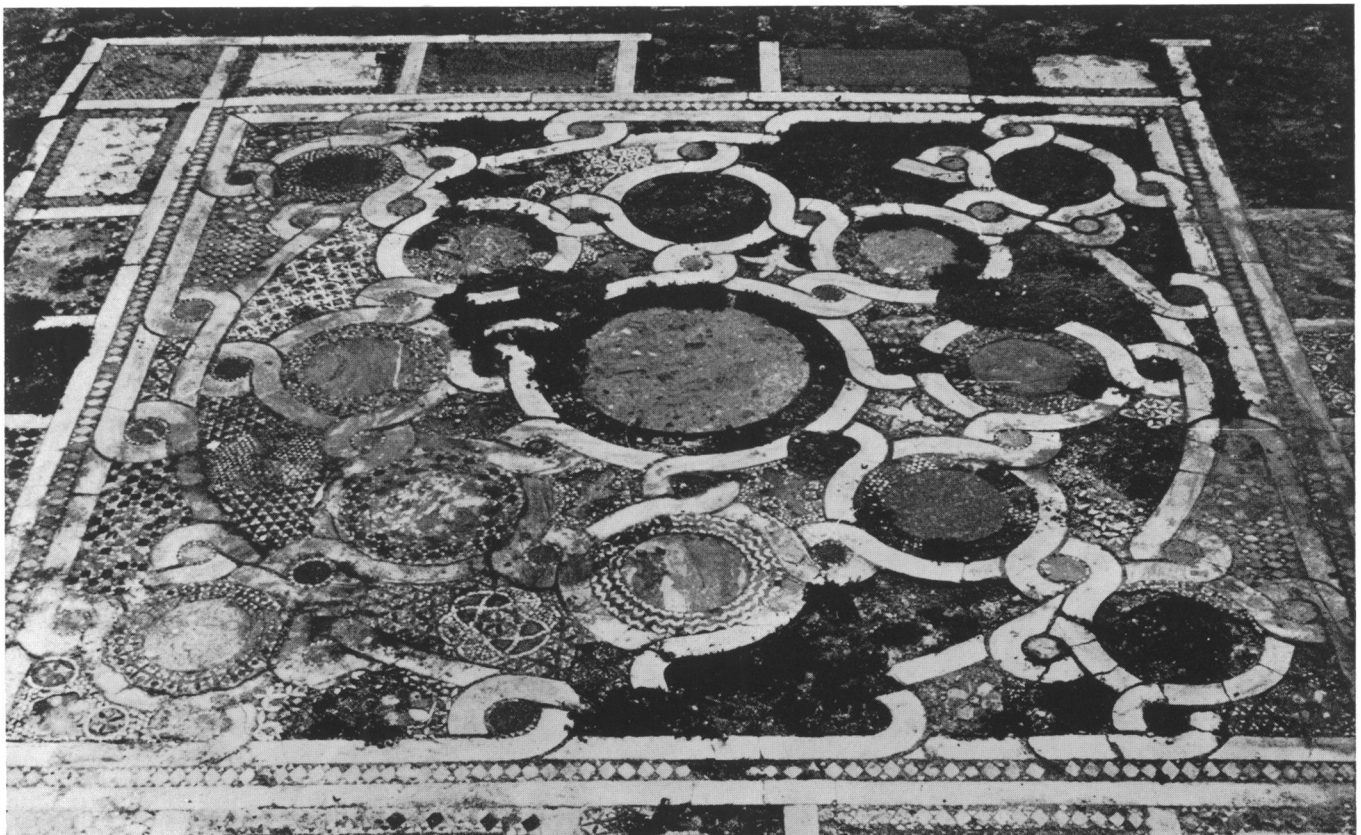
and became very popular during the period from the eleventh to the fourteenth century. Similar pavements were made at that time both in Italy and in the Islamic world, and in Islamic art the technique was used as late as the sixteenth century. The other important problem is the origin of interlacing and its use in different regions and in widely different works. This latter problem can be solved only on the basis of a comprehensive survey of works in which this type of decoration appears.<sup>58</sup>

<sup>58</sup> One of my students, Miss Yıldız Demiriz, is preparing a thesis on the Byzantine pavement mosaics in Turkey. The drawings and illustrations published with this Note are part of her work. I would like to thank her, as well as İlhan Hattatoğlu, another of my students, who took the photographs, and Mrs. Nemire Akin, who translated my text into English.



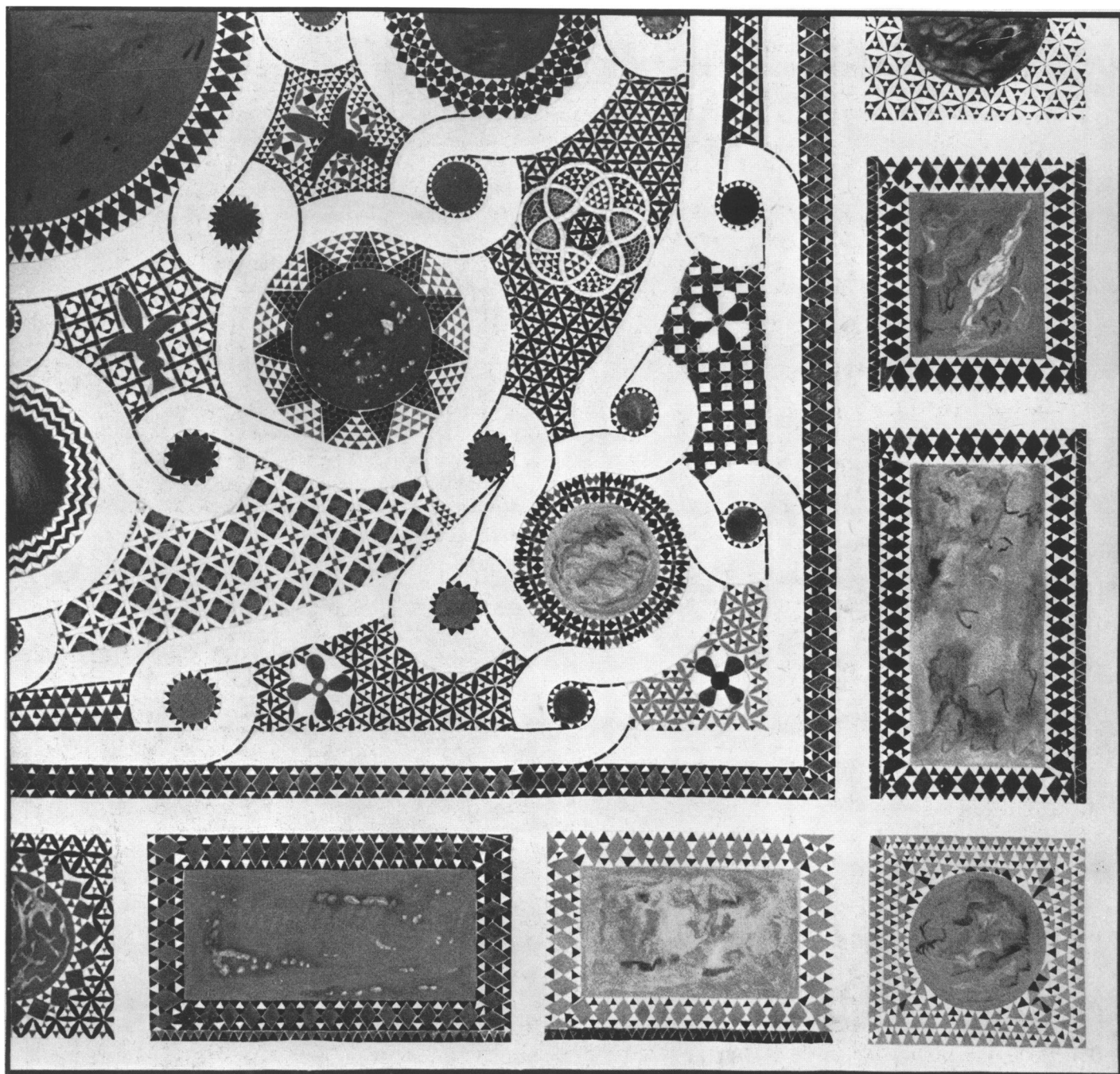


1. Iznik (Nicaea), Hagia Sophia. Marble Pavement in Bema

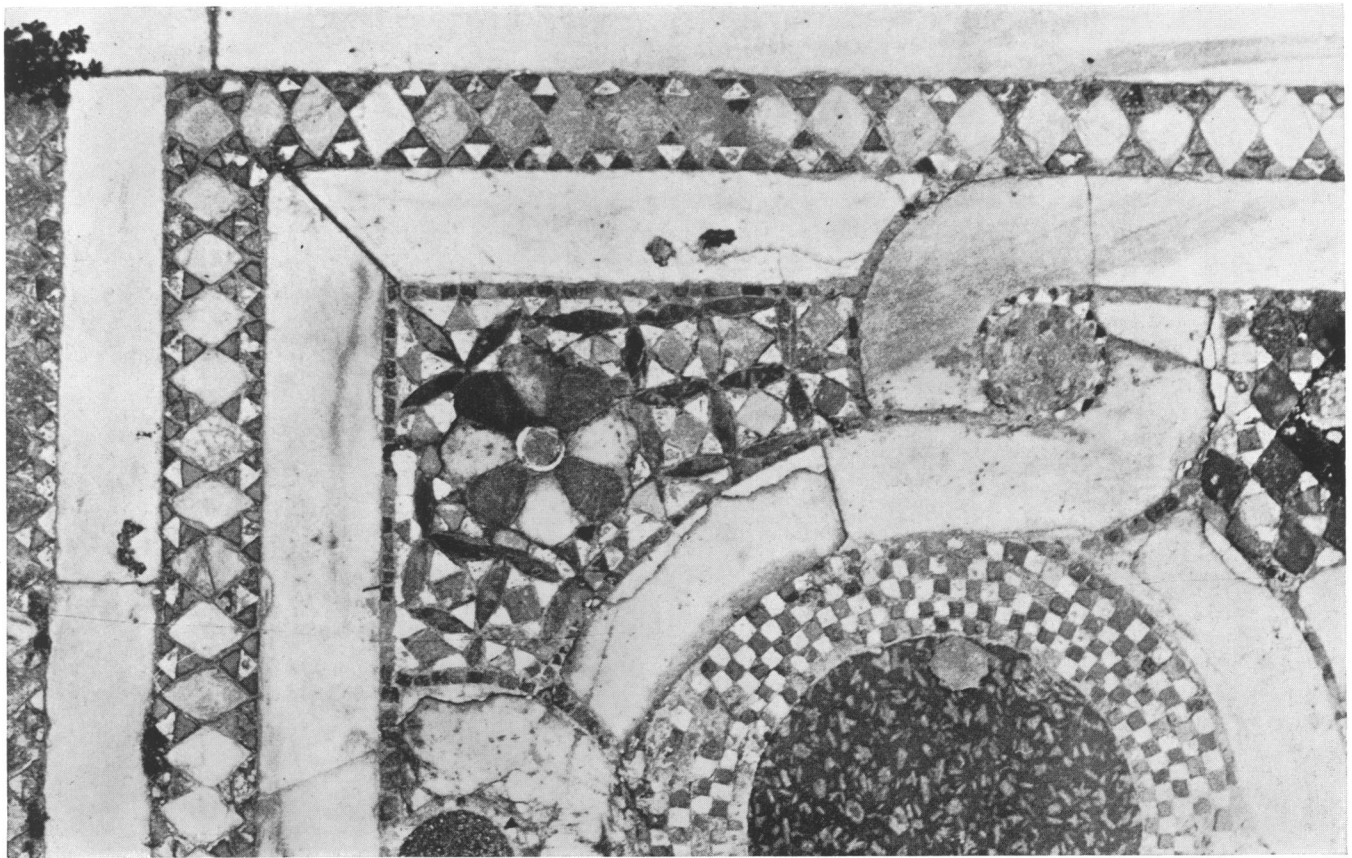


2. Iznik (Nicaea), Hagia Sophia. Mosaic Pavement in Nave

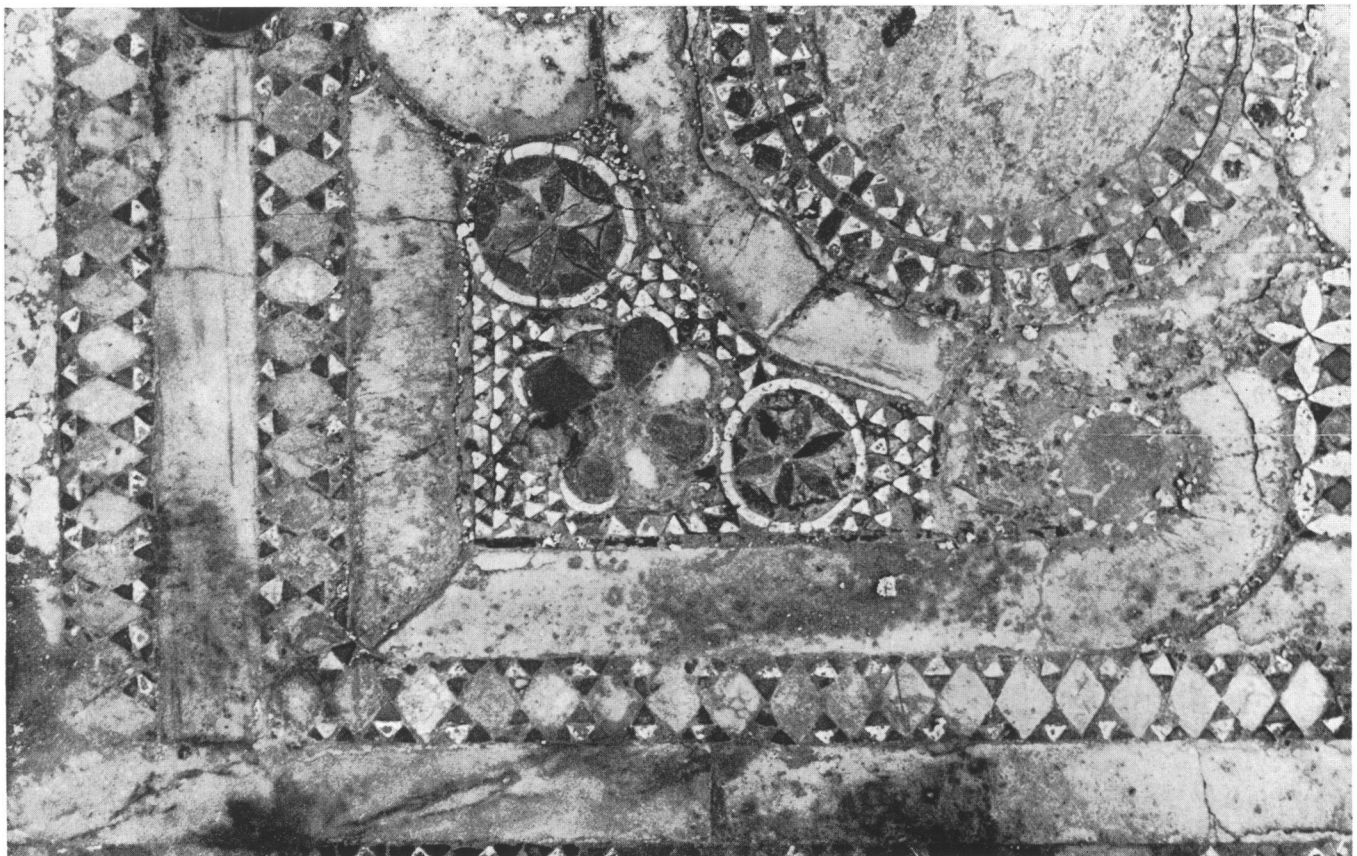




3. Iznik (Nicaea), Hagia Sophia. Mosaic Pavement in Nave, Reconstruction (Water color)



4. Iznik (Nicaea), Hagia Sophia. Mosaic Pavement in Nave, detail

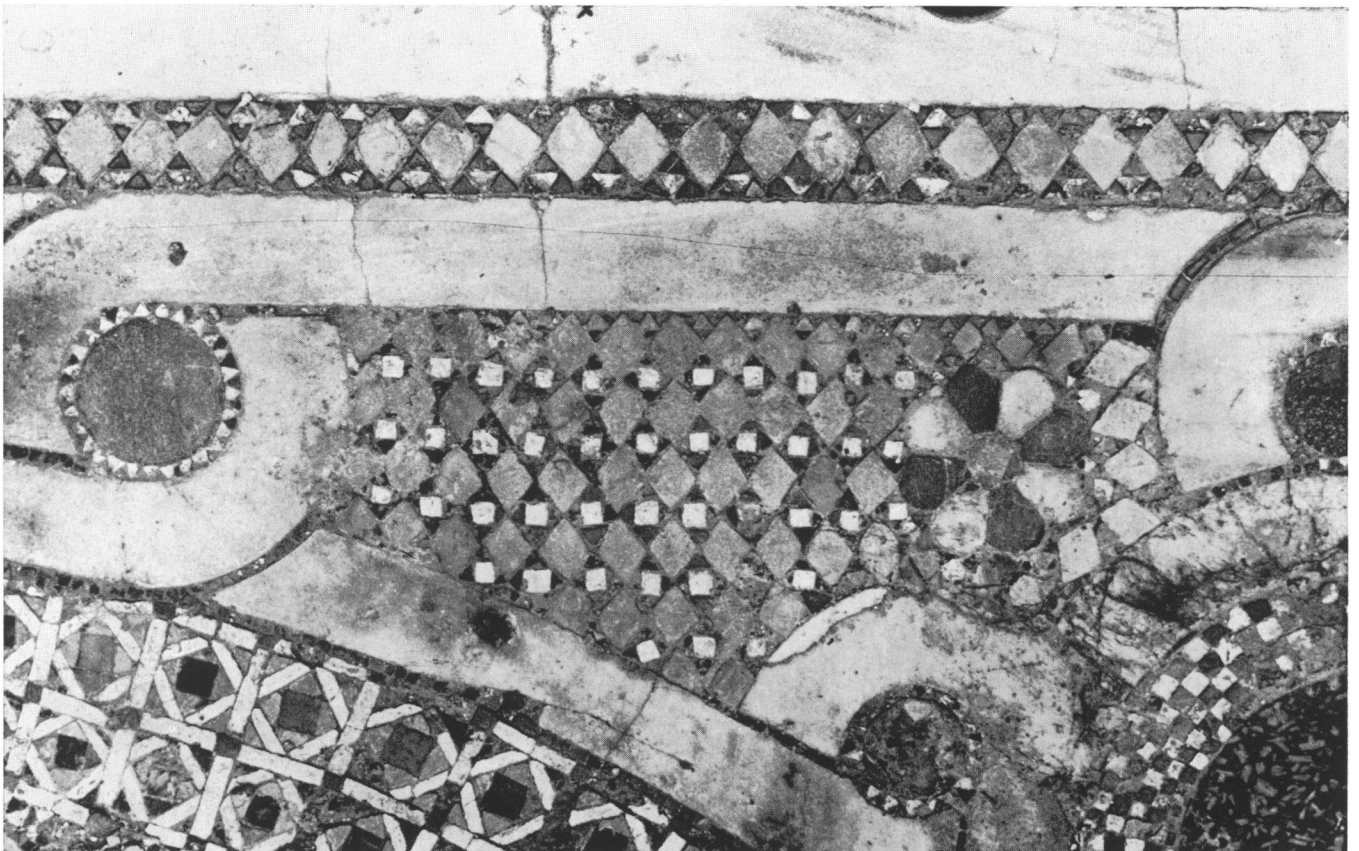


5. Iznik (Nicaea), Hagia Sophia. Mosaic Pavement in Nave, detail

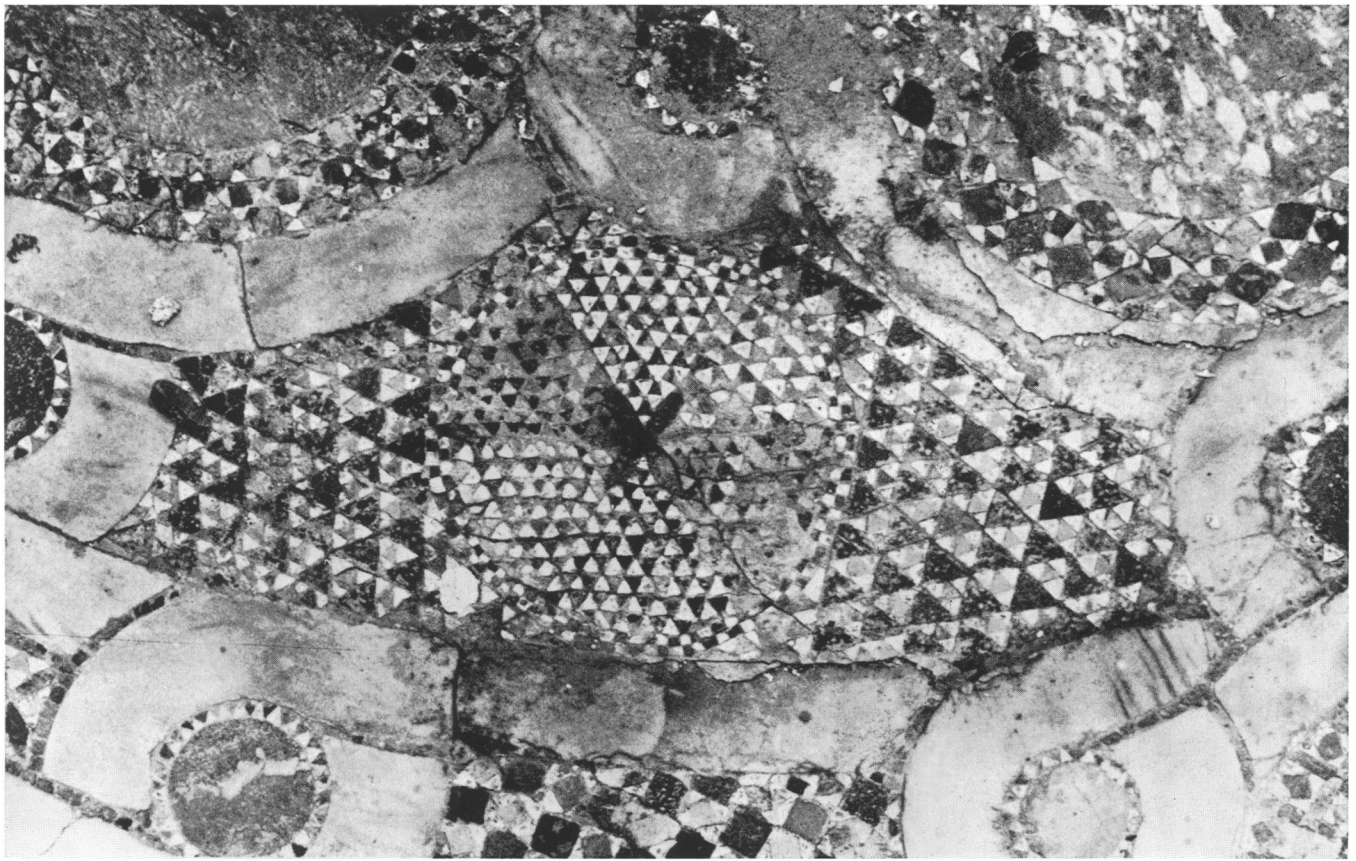




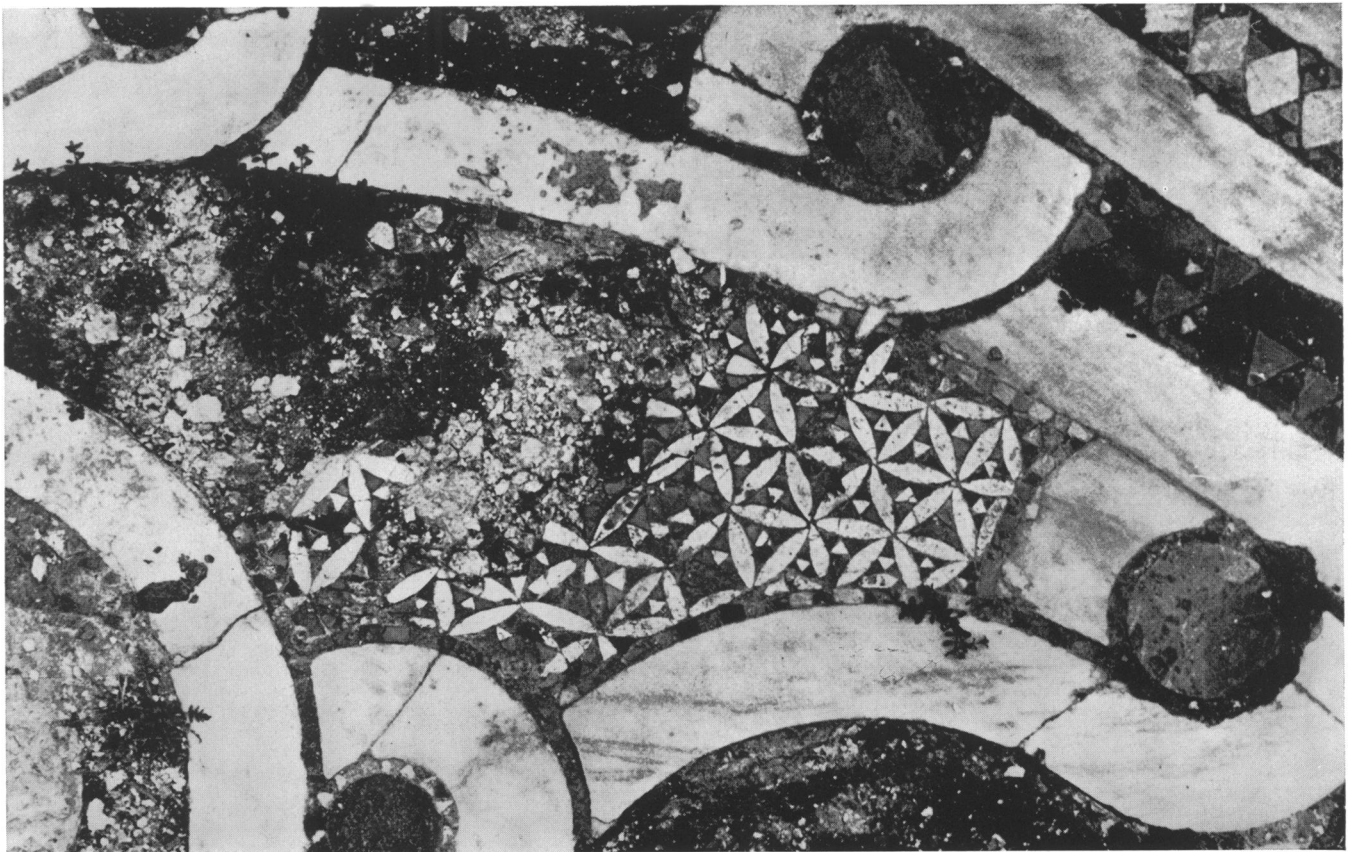
6. Iznik (Nicaea), Hagia Sophia. Mosaic Pavement in Nave, detail



7. Iznik (Nicaea), Hagia Sophia. Mosaic Pavement in Nave, detail



8. Iznik (Nicaea), Hagia Sophia. Mosaic Pavement in Nave, detail



9. Iznik (Nicaea), Hagia Sophia. Mosaic Pavement in Nave, detail





10. Iznik (Nicaea), Hagia Sophia. Mosaic Pavement in Nave, detail



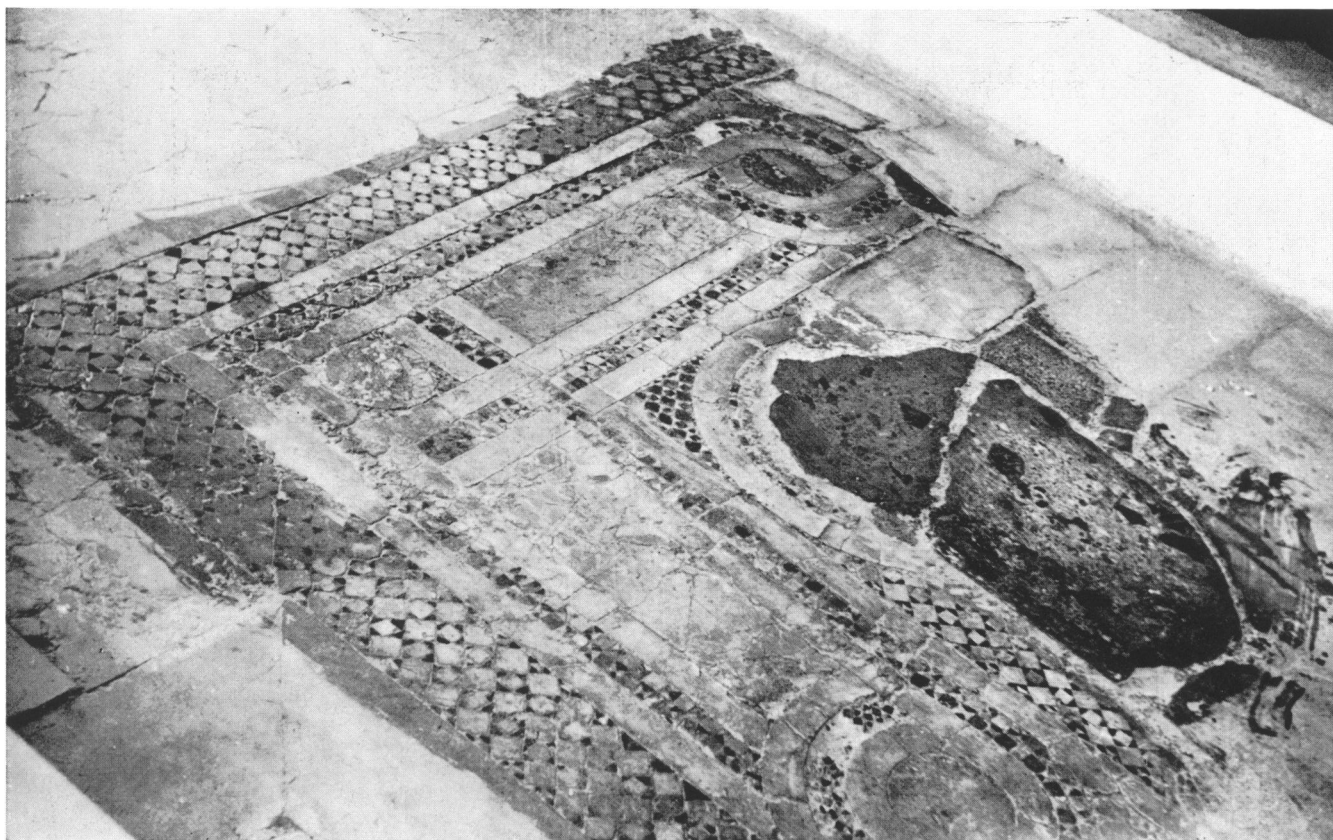
11. Bursa, Mausoleum of Orhan Gazi. Byzantine Pavement, Fragment B



12. Bursa, Mausoleum of Orhan Gazi. Byzantine Pavement, Fragment B, detail



13. Bursa, Mausoleum of Orhan Gazi. Byzantine Pavement, Fragment C



14. Bursa, Mausoleum of Orhan Gazi. Byzantine Pavement, Fragment D, detail



15. Bursa, Mausoleum of Orhan Gazi. Byzantine Pavement, Fragment D, detail



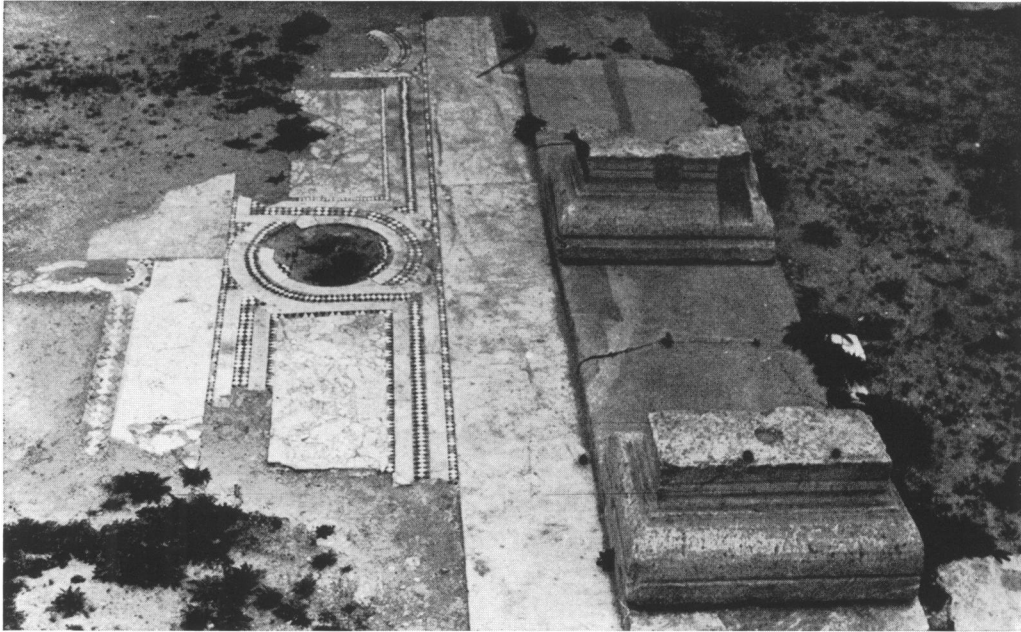


16. Fragment of Mosaic Pavement Found near Yakacik



17. Detail of Figure 18





18. Iznik (Nicaea), Koimesis Church. Remains of Pavement



19. Istanbul, Yedikule. Re-used Slab Formerly Filled with Mosaic